



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,263	01/18/2001	William H. Zebuhr	105019-0007	6146

24267 7590 12/05/2002
CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 12/05/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/765,263	Applicant(s) ZEBUHR, WILLIAM H.	
	Examiner Virginia Manoharan	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 30-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-12, 17-20, 24, 25 and 38 is/are rejected.
- 7) ☒ Claim(s) 6-9, 13-16, 21-23 and 26-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1764

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 10-12, 17-20, 24-25 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB '085, Hickman, Shafranovsky et al or Ramshaw et al.

The above references are applied for the same reasons as set forth at pages 4-5 of the previous office action.

Claims 6-9, 13-16, 21-23 and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed Aug. 9, 2002 have been fully considered but they are not persuasive.

Applicant's following arguments such as:

"... True, an apparatus claims that includes a functional limitation can be found to be anticipated by a reference that, although it does not describe the function claimed, does describe an apparatus that inherently performs that function. But no such case is presented by cited references, namely, British Patent Specification No. 757,085 and U.S. Patents Nos. 2,894,879 to Hickman, 4,198,360 to Shafranovsky et al., and 4,283,255 to Ramshaw et al....Nor has Applicant found in any of those references a basis for contending that the rate of irrigation of any irrigation system there described repeatedly reaches, as the claims require, a peak irrigation rate

Art. Unit: 1764

that is at least twice its average irrigation rate ..." are not persuasive of patentability for the following reasons.

Contrary to applicant's assertions, the metering valve (180) associated with nozzles (182) for example, of Hickman at col. 6, lines 62-68 and the sprinkling device referred to at col. 6, lines 46-54 of Shafranovsky et al and further the pumps the British reference would all be at least suggestives of the variability of the irrigation system used in the prior art. A person of ordinary skill in the art would recognize that the flow of a distilland through a nozzle or sprayer, not merely an aperture or a hole, is naturally regulated, adjusted or controlled when operated in conjunction with a metering valve or pump. Of course, the variations of flow e.g., spray flow rate, spray pattern and etc., depend on various considerations e.g., on desired production rate and efficiency of separation, on orifice diameter, flow velocity, geometry and flow condition of the spray nozzle or irrigating system, and etc.

Applicant fails to delineate how the means, nozzles or sprayer of the prior art differs from the claimed invention in the structural sense.

There are even no means recited nor provided in the claims nor in the specification used for varying, monitoring, regulating or controlling the peak rate, or the average rate such that the argued "... a varying-rate irrigation system whose rate for each evaporation chamber so varies as to have a peak at least twice its average" is measured.

The prior art sprayer or nozzles are deemed to be a variable system whose flow are subject to change as the pumping rate change or as is monitored by metering valves. Thus, the apparatus of the prior art is obviously capable of performing the argued function i.e., achieve "... a peak irrigation rate that is at least twice its average irrigation rate".

Art Unit: 1764

The sprayer or nozzle of the prior art would read on the claimed "varying-rate evaporation-chamber irrigation system" as broadly claimed in claim 1 or the means for irrigating each said evaporation chamber..." as broadly claimed e.g., in the newly added claim 38.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Miller disclose an apparatus involving pumping at controlled rates by suitable pumps.
- b. Wreszinski discloses that the relative concentrations in the various stages are deliberately controlled by regulating the pumping rates of the pumps.
- c. Jannone discloses a spray device capable of changing the rate dispersed over a wide range of dispersion rates.
- d. Proctor discloses a sprayer equipped with a metering device for variably controlling the ratio of the fluids being mixed.
- e. Hetrick et al discloses the strategy for varying the spray pattern.
- f. Assaf et al discloses controlling as the size of the droplets as a function of the horizontal velocity component.

Thus, in the absence of anything which may be "new" or "unexpected result", a prima facie case of obviousness is deemed to be reasonably established by the art and has not been rebutted.

Unexpected results must be established by factual evidence. Mere arguments or conclusory statements in the specification, applicant's amendments, or the Brief do not suffice.

Art Unit: 1764

In re Lindner, 457 F.2d 506, 508, 173 USPQ 356m 358 (CCPA 1972), In re Wood, 582, F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

This application contains claims 30-37 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 703-308-3844. The examiner can normally be reached on Tuesday-Friday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-4311. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9462 for After Final communications.

Application/Control Number: 09/765,263

Page 6

Art Unit: 1764

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

V. Manoharan/mn
December 4, 2002

King *MA*

1764
12/4/02